WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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March 20, 2007

File Ref: 4530-3
FID #: 113125320

Jim Lenz, Eng. Svc. Mngr.
Madison-Kipp Corporation
P. O. Box 8043
Madison, WI 53708-8043

Subject: Inspection of Madison-Kipp Corporation

Dear Mr. Lenz:

Attached is a copy of the report of the inspection of Madison-Kipp Corporation, Madison, Wisconsin. Please look over the inspection report for accuracy and content.

With questions on this letter or the attachments, please write or call me at (608) 273-5607.

Sincerely,

B. A. Patel

Biren A. Patel, P.E.
Air Management Engineer
South Central Region - Fitchburg

cc: South Central Region - Fitchburg
Bureau of Air Management - AM/7 (Inspections)
U.S.E.P.A.-Region V-AE/17J, Air Enforcement and Compliance Assurance Branch, 77 West Jackson St., Chicago, IL 60604-3590

DEPARTMENT OF NATURAL RESOURCES
SOUTH CENTRAL REGION
FULL AIR COMPLIANCE EVALUATION (FCE) SUMMARY

FID: 113125320	**FCE/SITE VISIT DATE:** 3/20/2007
FACILITY NAME AND LOCATION: Madison-Kipp Corporation 201 Waubesa St. Madison, WI 53704	**SOURCE TYPE:** ☑ FOP ☐ FESOP ☐ SOP
COUNTY: Dane	**NAICS CODE(S)/DESCRIPTION:** 3364 - Nonferrous die-casting exc. aluminum
INSPECTION PARTICIPANTS: Biren A. Patel – DNR Jim Lenz - MKC, Eng. Svc. Mngr. Craig Brown – MKC, OSES Mark Meunier, MKC, V. P. of HR	**APPLICABLE AIR PROGRAMS:** ☑ SIP ☑ NSPS ☐ NESHAP/MACT ☑ TOXIC

TOTAL ACTUAL FACILITY EMISSIONS IN TONS/YEAR:

	TSP	SO_2	NO_x	VOC	CO	PM10	HAP
2005	18.08	0.25	12.49	20.93	9.06	17.12	See end of the table
CLASS	A	B	A	A	A	A	SM
ATTAIN?	Attn	Attn	Attn	Attn	Attn	Attn	Attn

(Data above is from the 2003 emission inventory.)

HCL 1.50 TPY; Chlorine 0.049 TPY; Ammonia 0.31 TPY

IS FACILITY IN COMPLIANCE WITH ALL WISCONSIN AIR REGULATIONS? YES

INSPECTOR SIGNATURE: B. A. Patel

SIGNATURE DATE: 3/20/07.

NAME: Biren A. Patel
TITLE: Air Management Engineer - Advanced

Cc: Bureau of Air Management – AM/7 (Inspections)
US Environmental Protection Agency – Region V

FACILITY INFORMATION

FACILITY CONTACT:	FACILITY CONTACT PHONE/EMAIL:
Jim Lenz, Eng. Svc. Mngr	(608) 242-5217

FACILITY DESCRIPTION:

The facility is located at 2824 Atwood Avenue in Madison, Wisconsin. The Fair Oaks Plant is identified as FOF in the permit review. The land use in the area is a mixture of residential, light commercial, and industrial.

Madison-Kipp Corporation operates a facility at 2824 Atwood Avenue at which aluminum is melted, alloyed, demagged, drossed, degassed, and finally cast in aluminum diecasters. The facility at Atwood Avenue operates two aluminum melt furnaces - RCI 1 furnace in which drossing and demagging operations (removal of magnesium with chlorine gas) is performed. RCI 2 does not use chlorine. Degassing of aluminum is accomplished at a station which is vented to a baghouse. Molten aluminum is then transported via ladle to diecasters for casting. Die lube is used for the casting process.

One boiler that was fired by natural gas (primary fuel) or propane (back-up fuel) has been removed. Madison-Kipp operates a 2,000 KW output distillate fuel oil generator at the Atwood building.

The Atwood facility operates 4 small cold cleaners for equipment maintenance.

The building labeled Fair Oaks Facility (FOF) is located on contiguous property at 166 South Fair Oaks Street. The FOF facility operates one RCI furnace which is primarily used to remelt the plant runaround generated at the facility. Degassing of aluminum is accomplished at a station which is vented to a baghouse. Molten aluminum is then transported via ladle to diecasters for casting. Die lube is used for the casting process. The FOF facility operates 3 small cold cleaners for equipment maintenance.

Both facilities have machining and sub assembly operations.

POINT/PROCESS DESCRIPTION:

S17 P35 - RCI 1 Reverberatory Aluminum Melt Furnace #1 W/chlorine demagging, installed in 1990, 4.0 TPH maximum
S16, P36 - RCI 2 Reverberatory Aluminum Melt Furnace #2 W/chlorine demagging, installed in 2000, 4.0 TPH maximum
S07, P45 FOF RCI furnace #12 Reverberatory Aluminum Melt Furnace, 4.0 TPH maximum
S19, P40 - Atwood Facility Aluminum Diecasting; degassing and grit blast operations; ALUMINUM DEGASSING Installed 1971, modified 1996
S50 P50 - COLD CLEANERS (SAFETY-KLEEN). Installed 1980
S23, B23 - 2000 KW Caterpillar model 3516B electric generator - completed installation 2002
S05, P05 - FOF Facility Aluminum Diecasting; degassing and grit blast operations

Significant Emissions Units

Stack	Process
S05	FOF Aluminum Diecast. Three stacks: S05A, B, C (summer); S05A (winter) 7 diecast machines: P05 No external fuel. Electric. Degasser: Fugitive indoor vents through S05. 4 Grit Blasters: Fugitive indoor vents through S05.
S07	Furnace #12: P45 RCI 12 at FOF. No chlorine injection. Natural gas fired 12 mmBTU/hr.
S16	RCI 2 P36: Requested chlorine injection. Natural gas fired 12 mmBTU/hr.
S17	RCI 1 P35: Permitted for chlorine injection. Natural gas fired 12 mmBTU/hr.
S19	Atwood Diecast. Eight stacks: S19B1, C1, D1, E1, B2, C2, D2, F2 (summer); S19B2, C2, D2, F2 (winter) 17 diecast machines: P40 Natural gas fired holding furnaces totaling 10.232 mmBTU/hr. Some of the holding furnaces are electric. Degasser: Fugitive indoor vents through S19. 2 Grit Blasters: Fugitive indoor vents through S19.
S23	B23: Atwood 2000 kW Caterpillar Distillate Fuel Fired Turbine Generator.
P50	Fugitive Emissions from the Cold Cleaners

The facility is covered under the operation permit 113014220-P01, construction permit 00-BSP-929, and construction permit exemption letters. The facility has moved some of the diecast machines to the Sun Prairie location. Some of the diecast machines have been sold. The facility has reconfigured or is in the process of reconfiguring stack parameters to meet the AAQS for particulate matter using the approved air dispersion model AERMOD.

PERMIT(S)/EXEMPTION(S) ISSUED SINCE 2000:

Permit No.	Issue Date	Purpose of Permit	Expiration Date
05-BSP-288	09/15/2005	Air Pollution Control Construction Permit exemption letter to construct and operate 2 diecasters	N/A
04-JLH-301	12/16/2004	Research & Testing Exemption to test a new low VOC die-lube.	11/16/2005
03-POY-328	4/26/2004	Air Pollution Control Construction Permit to modify and operate two aluminum furnaces (RCI 1 and RCI 2) for processes P35 (100 feet stack S17) and P36 (100 feet stack S16).	Revoked at the request of the permittee.
03-BSP-252	10/02/2003	Research and Testing Exemption to operate RCI furnace while simultaneously charging scrap and injecting chlorine.	Total of 6 hours of testing
N/A	7/30/2002	Air Pollution Control Construction Permit exemption letter to construct and operate 2 diecasters	N/A
113014220-P01	5/10/2001	Air Pollution Control Operation Permit to operate an aluminum and zinc diecasting facility.	5/10/2006
00-BSP-929	12/20/2000	Air Pollution Control Construction Permit to construct and operate a 2000 KW Caterpillar model 3516B electric generator	12/20/2003
99-BSP-912	12/8/2000	Air Pollution Control Construction Permit to modify and revise operations of Stacks S17, S18, S19, S22 Process P34, P35, P40.	12/8/2003
00-BSP-944	12/8/2000	Air Pollution Control Construction Permit to construct and operate S16, P36 aluminum furnace with chlorine injection.	12/8/2003
N/A	4/20/2000	Air Pollution Control Construction Permit exemption letter to construct and operate a one ton per hour aluminum melt furnace fired on natural gas/propane.	N/A

In addition to the above, the Department's tracking system lists the following: 89-JFH-402; 92-DCF-137; 93-DCF-016; 93-DCF-016-OP; 95-MWH-027; 95-MWH-027-OP; 03-POY-328-OP; 113014220-P02; 95-MWH-042; 97-POY-071; 97-POY-071-R1; 98-JMS-907; 99-BSP-925.

Insignificant Emissions Units.

Maintenance of Grounds, Equipment, and Buildings; Boiler, Turbine, and HVAC system Maintenance

Pollution Control Equipment Maintenance; Internal Combustion Engines used for Warehouse and Material Transport

Fire Control Equipment; Janitorial Services; Office Activities; Convenience Water Heating

Convenience Space Heating (< 5 MMBTU/hr); Fuel Storage Tanks (<10,000 gal.)

Demineralization of Oxygen Scavenging of Water for Boilers; Purging of Natural Gas Lines

Sanitary Sewer and Plumbing Venting; Machining Operations; Wastewater Treatment Area; Metal Laboratory Area

Die Lube Storage Tanks

Walnut Shell Finishing

Heat Treat Furnaces

Casting Washers & Dryers

Cooling Tower

Acid Booths

COMPLIANCE OUTLINE

Air Pollution Control Construction **Permit #03-POY-328** was issued 4/26/2004 to modify and operate two aluminum furnaces (RCI I and RCI II) for processes P35 (100 feet stack S17) and P36 (100 feet stack S16). The facility is currently voluntarily not operating these furnaces as allowed by the Air Pollution Control Construction Permit #03-POY-328. Instead, the furnaces are operated as allowed by the previous permits. **Permit Revoked 5/3/2006 at the request of the facility.**

Air Pollution Control Operation **Permit #113014220-P01** issued 5/10/2001 to operate an aluminum and zinc diecasting facility.

S11 (35 FEET) B21 BOILER AND UNIT HEATERS - 4.2 MMBTU/hr installed before 1970

POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS
PM	0.012 pound/hr	The permittee shall only fire natural gas and propane in these combustion units. The permittee shall retain on site, plans and specifications that indicate the combustion unit's fuel usage design capabilities. To demonstrate compliance with the ambient air quality standard for this pollutant the permittee shall (a) maintain a matrix containing corresponding stack parameters and emission rates for all significant sources at the facility, and (b) record the operating scenario for each day, and (c) record the daily throughput or maximum throughput (ton) for each source in the matrix, and (d) record the most recent emission factor (lb/ton aluminum), and (e) record the allowable emission rate from the matrix which shows compliance with the particulate limitation, and (f) record the actual emission rate for each stack and verify that it does not exceed the allowable rate from the matrix.	Compliance - the boiler has been removed.
	Stack parameters	The permittee shall keep and maintain on site, technical drawings, blueprints or equivalent records of the physical stack parameters.	
VE	40% opacity	The permittee shall only fire natural gas and propane as fuels in this boiler and unit heaters. The permittee shall retain on site, plans and specifications that indicate the boiler's fuel usage design capabilities	Compliance - the boiler has been removed.

S17 P35 - RCI Reverberatory Aluminum Melt Furnace W/chlorine demagging, installed in 1990, 4.0 TPH maximum. - Two 60 feet stacks			
PM	1.51 pounds per hour. Stack Parameters: (a) stack height of S17 shall be at least 60 feet above ground level. (b) The stack inside diameter at the outlet of the east stack designated as S17 may not exceed 2.6 feet. (c) The stack height of the west stack designated as S17 shall be at least 60 feet above ground level. (d) The stack inside diameter at the outlet of the west stack designated as S17 may not exceed 2.8 feet. (e) The two stacks designated as S17 may not be equipped with a rainhat or other device which impedes the upward flow of the exhaust gases.	The permittee shall only fire natural gas and propane as fuels in this furnace. Only clean material including aluminum T-bar, sow, ingot, billet, pig, alloying materials, customer returns and Madison-Kipp manufacturing process scrap may be charged to this furnace. Purchased scrap may not be melted in this furnace. The permittee shall keep and maintain technical drawings, blueprints or equivalent records of the physical stack parameters. The permittee shall retain on site, plans and specifications that indicate the furnace fuel usage design capabilities. To demonstrate compliance with the ambient air quality standard for this pollutant the permittee shall (a) maintain a matrix containing corresponding stack parameters and emission rates for all significant sources at the facility, and (b) record the operating scenario for each day, and (c) record the daily throughput or maximum throughput (ton) for each source in the matrix, and (d) record the most recent emission factor (lb/ton aluminum), and (e) record the allowable emission rate from the matrix which shows compliance with the particulate limitation in B.1.a.(1), and (f) record the actual emission rate for each stack and verify that it does not exceed the allowable rate from the matrix. Madison Kipp Corp. shall keep records of diecaster and foundry employee training records defining (a) what is appropriate material to be charged to the furnace, and (b) how it is to be segregated and labeled. Madison-Kipp Corp. shall keep the necessary records to verify compliance with the condition which requires that purchased scrap not be melted at this facility.	Compliance
VE	20% opacity	The permittee shall only fire natural gas and propane as fuels in this furnace. The compliance demonstration methods listed for particulate matter may also be used for visible emissions. The permittee shall retain on site, plans and specifications that indicate the furnace fuel usage design capabilities. The recordkeeping listed for particulate matter may also be used for visible emissions.	Compliance

Chlorine	(a) maximum of 35 lbs/hr for a magnesium content of greater than 0.10% by weight (b) maximum of 30 lbs/hr for a magnesium content of greater than or equal to 0.07% by weight and less than or equal to 0.10% by weight (c) 0 lbs/hr for a magnesium content of less than 0.07% by weight. Stack parameters (a) The stack height of east and west S17 shall be at least 60 feet above ground level. (b) The stack inside diameter at the outlet of east S17 may not exceed 2.6 feet. (c) The stack inside diameter at the west S17 may not exceed 2.8 feet. (d) The stacks may not be equipped with a rainhat or other device which impedes the upward flow of the exhaust gases.	Chlorine may not be added to P35 when the metal temperature is less than 1335F. Chlorine may not be added to P35 when the recirculation injection pump motor amperage is less than 9 amps. Chlorine may not be added to P35 when the metal level in the furnace is more than 7 inches down from full. Nitrogen may not be added when chlorine is being added to the RCI furnace. The monitoring equipment required in this permit shall measure the operational variables with the following accuracy: (a) The temperature monitoring device shall be accurate to within 0.5% of the temperature being measured in degrees Fahrenheit or ±5F of the temperature being measured, or the equivalent in degrees Centigrade, whichever is greater. (b) The flow monitoring devices shall be accurate to within 5% of the current being measured. (c) The current (amperage) monitoring device shall be accurate to within 5% of the current being measured. The permittee shall continuously monitor the chlorine feed rate in units of pounds per hour when P35 is in operation. The permittee shall determine through analytical tests the magnesium content of the melted aluminum, in units of percent by weight, at least once every four hours when P35 is in operation and chlorine is added to the process. The permittee shall continuously record the chlorine flow rate. The permittee shall record the results of magnesium content testing. The permittee shall continuously (a) monitor and (b) record the metal temperature in the RCI furnace (P35) when the unit is in operation. The permittee shall monitor the recirculation injection pump motor amperage. The pump amperage shall be recorded at least once during each eight hours that chlorine is added to the RCI furnace (P35). The permittee shall monitor the metal level in the RCI furnace. The furnace metal level (in units of inches down from full) shall be recorded at least once during each two hour period that chlorine is added to the RCI furnace (P35). The permittee shall continuously monitor the nitrogen addition to the RCI 1 furnace. When the nitrogen system is in use, the nitrogen addition shall be recorded at the start up of the chlorine addition and prior to the shut down of the chlorine addition to the RCI 1 furnace (P35). All instruments used to monitor operational variables shall be calibrated yearly or at a frequency based on good engineering practice as established by operational history, whichever is more frequent. Calibration logs shall be kept and maintained by the permittee for each monitoring device required by this permit. The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters for each of the stacks designated as S17.	Compliance

HCL	22.6 pounds per hour	The compliance demonstration methods for chlorine shall be used to demonstrate compliance with the hydrogen chloride limitation The monitoring and recordkeeping requirements for chlorine shall also serve as the recordkeeping for hydrogen chloride emission limitations.	Compliance
Aluminum Soluble Salts	0.672 pound per hour	The compliance demonstration methods for chlorine shall also be used to demonstrate compliance with the aluminum soluble salts limitation The permittee shall monitor (a) chlorine usage in pounds per hour, (b) the aluminum melt rate in tons per hour, (c) the percentage of magnesium present in the aluminum, and (d) the type of fuel burned.	Compliance
2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.0001 pounds/year or BACT (best available control technology)	A separation of no less than 5 minutes shall occur between the introduction of chlorine to the furnace and the charging of materials other than aluminum T-bar, sow, ingot, billet, pig and alloying elements. Madison-Kipp Corp. shall maintain a real time process controller that interlocks the introduction of chlorine and the charging of materials other than aluminum T-bar, sow, ingot, billet, pig and alloying elements such that 5 minutes of separation must occur between these activities. Madison-Kipp Corp. shall record the time (a) that chlorine is added to the furnace and (b) the time scrap is added to the furnace.	Compliance
Stack S19, Process P40 - Atwood Facility Aluminum Diecasting - Stack S22 - Alternate Operating Scenario			
Volatile organic Compounds (VOCs)	LACT (latest available control techniques) for the operation of aluminum diecasters is defined as the use of "low VOC" die lube. "Low VOC" die lube for this process is defined as: (a) the water content of the die lube, as received, may not be less than 75% by weight, and (b) The die lube, as applied, shall be diluted to a ratio of at least 55 parts of water to one part die lube (by volume). (c) As an alternative to (a) and (b), the lubricant blend portion of the die lube shall be diluted at a ratio of at least 223 parts water by volume to one part lubricant blend (by volume).	Madison Kipp Corp. shall keep and maintain on site a current material safety data sheet (MSDS) or equivalent for the die lube. Madison Kipp Corp. shall keep and maintain on site a calibration and maintenance log for the mixing equipment. If the alternative LACT of is used, Madison Kipp Corp. shall record, the amount of die lube material used, the total amount of water added to the mix, and the dilution ratio of the parts of water (by volume) to the parts of lubricant blend (by volume) shall be calculated and recorded.	Compliance

PM	8.92 pounds per hour for S19 Stack S19 Parameters (a) The height of the seven stacks serving P40 labeled S19A1-G1 shall be at least 46 feet above ground level. (b) The equivalent inside diameter at the outlet of each of the seven stacks serving P40 labeled S19A1-G1 may not exceed 13.2 feet. (c) The height of the four stacks serving P40 labeled as S19B2-F2 shall be at least 44.0 feet above ground level. (d) The equivalent inside diameter at the outlet of the each stack serving P40 labeled as S19B2-F2 may not exceed 6.76 feet. 14.03 pounds per hour for S22 Stack S22 Parameters (a) The height of the stack serving P40 labeled S22 shall be at least 100 feet above ground level. (b) The inside diameter at the outlet of the stack serving P40 labeled S22 may not exceed 15.0 feet. (c) The stack may not be equipped with a rainhat or other device which impedes the upward flow of the exhaust gas LACT	The permittee may only fire natural gas and propane as fuels in any furnace at the Atwood building. The permittee shall retain on site, plans and specifications that indicate any furnace fuel usage design capabilities. The permittee shall keep and maintain technical drawings, blueprints or equivalent records of the physical stack parameters. To demonstrate compliance with the ambient air quality standard for this pollutant the permittee shall (a) maintain a matrix containing corresponding stack parameters and emission rates for all significant sources at the facility including P40, and (b) record the operating scenario for each day, and (c) record the daily throughput or maximum throughput (ton) for each source in the matrix, and (d) record the most recent emission factor, and (e) record the allowable emission rate from the matrix which shows compliance with the particulate limitation, and (f) record the actual emission rate for each stack and verify that it does not exceed the allowable rate from the matrix. The recordkeeping requirements of VOC shall also serve as recordkeeping requirements for the particulate limitations.	Compliance
Visible Emissions	20% opacity	The particulate matter compliance demonstration methods shall be used.	Compliance

S20 P37 C20 - ALUMINUM DEGASSING Installed 1971, modified 1996. 60 feet stack			
PM	0.05 pound per hour Stack parameters	A baghouse shall be used at all times that this process is in operation. The pressure drop across the baghouse shall be maintained between 0.5 and 8 inches water column. The permittee shall continuously monitor the pressure drop range across the baghouse. The permittee shall record the pressure drop across the baghouse at least once per shift or once every eight hours, whichever yields the greater number of readings. The permittee shall keep and maintain technical drawings, blueprints or equivalent records of the physical stack parameters. To demonstrate compliance with the ambient air quality standard for this pollutant the permittee shall (a) maintain a matrix containing corresponding stack parameters and emission rates for all significant sources at the facility including P37, and (b) record the operating scenario for each day, and (c) record the daily throughput or maximum throughput (ton) for each source in the matrix, and (d) record the most recent emission factor, and (e) record the allowable emission rate from the matrix which shows compliance with the particulate limitation, and (f) record the actual emission rate for each stack and verify that it does not exceed the allowable rate from the matrix.	Compliance - The baghouse vents inside and the stack is physically disabled from venting outside. Therefore, nothing applies.
VE	20% opacity	The particulate matter compliance demonstration methods shall be used.	Compliance - The baghouse vents inside and the stack is physically disabled from venting outside. Therefore, nothing applies.
S50 P50 - COLD CLEANERS (SAFETY-KLEEN). Installed 1980.			
VOC	Operating practices to minimize emissions	Each year, actual emissions shall be reported on the Wisconsin Annual Emissions Inventory as described in ch. NR 438, Wis. Adm. Code. The facility shall develop an annual training plan for operators of this equipment.	Compliance - The baghouse vents inside and the stack is physically disabled from venting outside. Therefore, nothing applies.

B10, S10, B20, S20, B30, S30 - Three generators for Fair Oaks Facility each rated at 900 kW standby capacity. Installed 1997			
PM	0.45 pound per hour for each generator Only two generators may be operated at the same time until new fans are completed at FOF and stack S22 is completed at Atwood. Stack Parameters (a) The height of each stack serving diesel generator/engine set B10 shall be at least 42.0 feet above ground level. (b) The height of each stack serving each diesel generator/engine set B20 and B30 shall be at least 18.0 feet above ground level. (c) The inside diameter at the outlet of each stack serving each diesel generator/engine set may not exceed 0.83 feet.	Only distillate diesel fuel oil may be used as fuel in each of the generator/engine sets. The permittee shall keep and maintain technical drawings, blueprints or equivalent records of the physical stack parameters. The permittee shall keep and maintain records of the type of fuel used in each of the generator/engine sets. The records shall be compiled monthly. The permittee shall keep and maintain daily records of the hours of operation for the generator/engine sets. To demonstrate compliance with the ambient air quality standard for this pollutant the permittee shall (a) maintain a matrix containing corresponding stack parameters and emission rates for all significant sources at the facility including B10, B20 and B30, and (b) record the operating scenario for each day, and (c) record the daily throughput or maximum throughput (ton) for each source in the matrix, and (d) record the most recent emission factor, and (e) record the allowable emission rate from the matrix which shows compliance with the particulate limitation, and (f) record the actual emission rate for each stack and verify that it does not exceed the allowable rate from the matrix.	Compliance - The generators are rented on as needed basis.
VE	20% opacity	Only distillate diesel fuel oil may be used as fuel in each of the generator/engine sets. The permittee shall retain on site, plans and specifications that indicate the fuel usage design capabilities.	Compliance - The generators are rented on as needed basis.
Nitrogen Oxides (NOx)	The hours of operation for each generator/engine set may not exceed 68.3 hours per month, averaged over any 12 consecutive months.	The generators shall be equipped with an hour (elapsed time/running time) meter. The permittee shall keep and maintain daily records of the hours of operation for each of the generator/engine sets. The records shall be compiled monthly to demonstrate compliance with permit condition which limits the operating hours for each generator.	Compliance - The generators are rented on as needed basis.
Stack S01, S02, Process P01 - FOF zinc diecasting			
PM	1.89 pounds per hour Stack Parameters (a) The height of the stack serving P01 shall be at least 26.0 feet above ground level. (b) The inside diameter at the outlet of the stack serving P01 may not exceed 27.0 feet.	To demonstrate compliance with the ambient air quality standard for this pollutant the permittee shall (a) maintain a matrix containing corresponding stack parameters and emission rates for all significant sources at the facility including P01, and (b) record the operating scenario for each day, and (c) record the daily throughput or maximum throughput (ton) for each source in the matrix, and (d) record the most recent emission factor, and (e) record the allowable emission rate from the matrix which shows compliance with the particulate limitation, and (f) record the actual emission rate for each stack and verify that it does not exceed the allowable rate from the matrix.	Compliance – process removed
VE	20% opacity	Compliance with visible emission limits shall be determined by methods described in sec. NR 439.06(9)(a)1, Wis. Adm. Code.	Compliance - removed

Stack S04, Process P04 - 2 Grit Blasters			
PM	0.32 pounds per hour Stack Parameters (a) The height of the stack serving P04 shall be at least 19.0 feet above ground level. (b) The inside diameter at the outlet of the stack serving P04 may not exceed 0.67 feet.	A baghouse shall be used at all times that this process is in operation. The pressure drop across the baghouse shall be maintained between 1.0 and 4.0 inches water column. The permittee shall continuously monitor the pressure drop range across the baghouse. The permittee shall record the pressure drop across the baghouse at least once per shift or once every eight hours, whichever yields the greater number of readings. The permittee shall keep and maintain onsite, technical drawings, blueprints or equivalent records of the physical stack parameters. To demonstrate compliance with the ambient air quality standard for this pollutant the permittee shall (a) maintain a matrix containing corresponding stack parameters and emission rates for all significant sources at the facility including P04, and (b) record the operating scenario for each day, and (c) record the daily throughput or maximum throughput (ton) for each source in the matrix, and (d) record the most recent emission factor (lb/ton aluminum), and (e) record the allowable emission rate from the matrix which shows compliance with the particulate limitation, and (f) record the actual emission rate for each stack and verify that it does not exceed the allowable rate from the matrix.	Compliance – process vented inside
VE	20% opacity	Compliance with visible emission limits shall be determined by methods described for particulate matter.	Compliance – process vented inside
Stacks S03 and S05, or S43, Process P05 - FOF Aluminum (and Zinc) Diecasting			
VOCs	LACT (latest available control techniques) for the operation of aluminum diecasters is defined as the use of "low VOC" die lube. "Low VOC" die lube for this process is defined as: (a) the water content of the die lube, as received, may not be less than 75% by weight, and (b) The die lube, as applied, shall be diluted to a ratio of at least 55 parts of water to one part die lube (by volume). (c) As an alternative to (a) and (b), the lubricant blend portion of the die lube shall be diluted at a ratio of at least 223 parts water by volume to one part lubricant blend (by volume).	Madison Kipp Corp. shall keep and maintain on site a current material safety data sheet (MSDS) or equivalent for the die lube. Madison Kipp Corp. shall keep and maintain on site a calibration and maintenance log for the mixing equipment. If the alternative LACT is used, Madison Kipp Corp. shall record the amount of die lube material used and the total amount of water added to the mix. The dilution ratio of the parts of water (by volume) to the parts of lubricant blend (by volume) shall be calculated and recorded.	Compliance – zinc removed

PM	6.99 pounds per hour Stack Parameters (a) The heights of the two stacks serving P05 shall be at least 37.7 feet above ground level. (b) The inside diameters at the outlet of the stacks serving P05 may not exceed 5.68 feet.	Only clean material including aluminum T-bar, sow, ingot, billet, pig, alloying materials, customer returns and Madison-Kipp manufacturing process scrap may be charged in any aluminum furnace at Fair Oaks. No fluxing or demagging practices for cleaning metal are allowed. The permittee may only fire natural gas and propane as fuels in any furnace at the Fair Oaks building. The monitoring and recordkeeping requirements of VOC shall also serve as compliance demonstration methods for the particulate limitations. Madison Kipp Corp. shall keep the necessary records to verify that (a) only clean material be charged in any furnace, and (b) no fluxing or demagging practices for cleaning metal are allowed at the Fair Oaks Facility building. The permittee shall retain on site, plans and specifications that indicate the furnace fuel usage design capabilities. The permittee shall keep and maintain technical drawings, blueprints or equivalent records of the physical stack parameters. To demonstrate compliance with the ambient air quality standard for this pollutant the permittee shall (a) maintain a matrix containing corresponding stack parameters and emission rates for all significant sources at the facility including P05, and (b) record the operating scenario for each day, and (c) record the daily throughput or maximum throughput (ton) for each source in the matrix, and (d) record the most recent emission factor, and (e) record the allowable emission rate from the matrix which shows compliance with the particulate limitation, and (f) record the actual emission rate for each stack and verify that it does not exceed the allowable rate from the matrix.	Compliance – zinc removed
VE	20% opacity	Compliance with visible emission limits shall be determined by methods described for particulate matter.	Compliance – zinc removed

S12 B22 Propane Vaporizing boiler - 0.9 MMBTU/hr installed April 1, 1988			
PM	0.003 pound per hour	The permittee shall only fire natural gas and propane in these combustion units. The permittee shall retain on site, plans and specifications that indicate the combustion unit's fuel usage design capabilities. The permittee shall keep and maintain on site, technical drawings, blueprints or equivalent records of the physical stack parameters. To demonstrate compliance with the ambient air quality standard for this pollutant the permittee shall (a) maintain a matrix containing corresponding stack parameters and emission rates for all significant sources at the facility including B22, and (b) record the operating scenario for each day, and (c) record the daily throughput or maximum throughput (ton) for each source in the matrix, and (d) record the most recent emission factor, and (e) record the allowable emission rate from the matrix which shows compliance with the particulate limitation, and (f) record the actual emission rate for each stack and verify that it does not exceed the allowable rate from the matrix.	Compliance - removed
VE	20% opacity	The permittee shall only fire natural gas and propane as fuels in this boiler. The permittee shall retain on site, plans and specifications that indicate the boiler's fuel usage design capabilities.	Compliance - removed
Facility			
Malodorous Emissions	Operating practices to minimize emissions from doors and windows	While operating, the facility shall inspect the area near their property boundaries to determine if any malodorous emissions originating from the facility are detected. The facility shall implement and maintain a plan that details their response if an malodorous emission originating from the facility is detected either during the inspection or through contact from neighbors or the department, while operating. The plan should include, at a minimum: (a) A main contact at the facility for odor complaints/survey responsibility. (b) A list of the information the contact will collect when receiving a complaint or performing the inspection. (c) Details of steps to be taken to investigate when any odors are detected. (d) Procedures for documenting the results of complaints/inspections and actions taken to resolve the issue. Madison-Kipp shall follow prescribed standards in the maintenance of premises to minimize emissions from open doors and windows. In the event odors originating from the facility are detected either through the odor inspection or through a complaint received from neighbors, the facility shall: (a) log the event, including date received and initials of person detecting the odor/receiving the complaint, (b) proceed with the response plan required, and (c) then log the actions taken under the plan, including the date the action was taken and initials of person performing action. Within 90 days of permit issuance Madison-Kipp shall submit to the Department for approval a plan to minimize emissions from open doors and windows.	Compliance

Reporting	Submittal of monitoring summary, compliance certification, and annual air emissions.	Submit to the Department Monitoring Reports every 6 months. The time periods to be addressed by the submittal are: January 1 to June 30 and July 1 to December 31. The report shall be submitted to South Central Region Air Program within 30 days after the end of each reporting period. All deviations from and violations of applicable requirements shall be clearly identified in the submittal. Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report. The permittee shall submit an annual certification of compliance with the requirements of this permit to the Wisconsin Department of Natural Resources, South Central Region Air Program, 3911 Fish Hatchery Road, Fitchburg, WI 53711, phone (608) 275-3266, and to Compliance Data - Wisconsin, Air and Radiation Division, U.S. EPA, 77 W. Jackson, Chicago, IL 60604. The time period to be addressed by the report is the January 1 to December 31 period which precedes the report. The report shall be submitted within 30 days after the end of each reporting period. Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report. Annual air emissions report shall be submitted by March 1 of each year for the previous year.	Compliance

Air Pollution Control Construction **Permit #99-BSP-912** (modify and revise operations of Stacks S17, S18, S19, S22 Process P34, P35, P40 issued 12/8/2000. Alternate operating scenario where P34, P35, and P40 exhausts through a 100 ft stack, S22, has not been operational yet. **Permit Expired.**

Air Pollution Control Construction **Permit #00-BSP-944** (S16, P36 aluminum furnace with chlorine injection) issued 12/8/2000 **Permit Expired.**

Air Pollution Control Construction **Permit #00-BSP-929** S23, B23 issued 12/20/2000 for construction and operation of a 2000 KW generator

POLLUTANT	LIMITATION	COMPLIANCE DEMONSTRATION	COMPLIANCE STATUS
PM	2.275 pounds/hour and 0.5 pound/mmBtu heat input Stack parameters	Only distillate diesel fuel oil may be used as fuel in the generator/engine set. Initial compliance stacktest The permittee shall maintain and calibrate the engine to peak performance on an annual basis. The permittee shall keep and maintain records of the type of fuel used in the generator/engine set. The permittee shall record information on the annual engine tune-up and emission testing required and have the records available on site during inspections by Department personnel. The permittee shall keep and maintain technical drawings, blueprints or equivalent records of the physical stack parameters.	Compliance
VE	20% opacity	Only distillate diesel fuel oil may be used as fuel in the generator/engine set	Compliance
NOx	102.90 pounds/hour 83 hours/month operation averaged over any 12 consecutive month period	The generator shall be equipped with an hour (elapsed time/running time) meter. Initial compliance stacktest The permittee shall keep and maintain daily records of the hours of operation for the generator/engine set, and the records shall be compiled monthly to demonstrate compliance with the condition limiting the operating hours for the generator.	Compliance

FACILITY REPORTING REQUIREMENTS:

Requirement	Frequency and/or Due Date	Compliance Status
Annual compliance certification	Annual	compliance
Semi-annual monitoring report	Semi-annually	compliance
Emissions Inventory	Annual	compliance

RESULTS OF PREVIOUS FCEs/SITE VISITS:

FCE/Site Visit Date	Result	Comments
06/13/2005	Compliance	None.

RESULTS OF PREVIOUS EMISSION TESTS:

Source	Test Date/Year	Pollutant(S)	Emission Limit	Result	Comments
S17, P35	10/24-25/03	PM	1.51 lbs/hr	3.00 lbs/hr	Non-Compliance - Applied and granted new limit of 8.5 lbs/hr
		Aluminum Soluble Salts	0.672 lb/hr	0.620 lb/hr	Compliance - Applied and granted new limit of 2.0 lbs/hr
		HCL	22.6 lbs/hr	12.7 lbs/hr	Compliance
		Chlorine	62 lbs/hr	2.1 lbs/hr	Compliance
		Total Dioxin	0.0001 lb/yr	0.0025 lb/yr	Compliance - eventhough the test results appear to show an exceedance of limit based on 8760 hrs/yr, the facility never exceeded annual limit. The facility also never exceeded annual limit based on the emission factor for dioxin emissions per pound of chlorine and amountof chlorine used. The facility is operating with 5-minumte separation between chlorine injection and internal scrap introduction to the furnace and maximum 35 lbs/hr chlorine injection. The test was done without 5 - minute separation. A previous test with 5 - minute separation and maximum 35 lbs/hr chlorine injection results in compliance with the annual limit.
		Opacity	20%	0.47%	Compliance
S23, B23	5/3/02	PM	2.275 lbs/hr	1.995 lbs/hr	Compliance
		NOx	102.9 lbs/hr	26.06 lbs/hr	Compliance
S16, P36	5/4-5/01	HCL	22.6 lbs/hr	5.474 lbs/hr	Compliance
		Chlorine	35 lbs/hr	0.177 lb/hr	Compliance
		Aluminum Soluble Salts	0.672 lb/hr	0.187 lb/hr	Compliance
		Total Dioxin	0.0001 lb/yr	0.000003 lb/yr	Compliance

SUMMARY OF PREVIOUS COMPLAINTS:

Complaint Date	Complaint Description	Follow-Up Action	Comments
2007	Several - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2006	Several - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2005	2 - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2004	4 - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2003	Several - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2002	Several - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2001	Several - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.
2000	Several - Odor/health	DNR staff visited the facility area and contacted the facility.	No objectionable odors were found. The facility reported no upsets in the operations. The facility operations were within the permit limits.

SUMMARY OF PREVIOUS ENFORCEMENT ACTIONS:

Action Date	Action Type	Nr Code Cited	Resolved [Y/N]	Comments
2/2/2004	NOV	exceedance of 1.51lbs PM/hr limit during a stacktest	Y	The facility applied for and received a modification to the permit to increase the particulate matter emissions limit on the furnaces to 8.5 pounds per hour as allowed by the Wisconsin Administrative Code. The Notice of Violation was closed out on 10/5/2004.

INSPECTION FIELD NOTES AND DISCUSSION

All the required records are kept and maintained.

RECOMMENDATIONS/CONCLUSIONS

The permittee is in compliance with all permit conditions, Wis. Adm. Codes and Wis. Statutes.

SAFETY EQUIPMENT REQUIRED TO GAIN ACCESS TO SITE:

☑ **HEARING PROTECTION**
☑ **HARD HAT**
☑ **SAFETY GLASSES**
☑ **BOOTS**
☐ **OTHER (please list)**